

### **ABSTRACT OF THE DISCLOSURE**

A misfire detector is provided that is accurate even in the case of a disturbance due to causes such as driving on a rough road. The misfire detector is equipped with a crankshaft revolution detector to measure the time period required for the crankshaft of an internal-combustion engine to revolve for a given angle. A signal-processor is also provided for detecting the misfiring of the internal-combustion engine by processing the time period. In one embodiment, the misfire detector has two filters having the same sensitivity to the misfire frequency, and differing in the sensitivity to frequencies adjacent to said misfire frequency. It can be determined that a misfire has occurred if the ratio or difference between the outputs of the two filters stays within a fixed range and one or both of the filters have respective outputs exceeding a threshold value.